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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,783	08/31/2001	James K. Guy	7784-000263	1040

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EXAMINER

ROY, SIKHA

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/943,783	Applicant(s) GUY ET AL.	
	Examiner Sikha Roy	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Amendment, filed on September 23, 2003 has been entered and is acknowledged by the Examiner.

New claim 16 has been entered.

Drawings

The drawings in Figs. 5 and 6 are objected to under 37 CFR 1.83(a) because they fail to show the arc gap or filament length AG (in Fig. 5) and focal point F_1 , diameter of the illuminated zone D_1 and the diameter of the target D_{spot} in Fig. 6 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 recites the limitation "said first and second ends" in 11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,406,462 to Fallahi et al. in view of U.S. Patent 5,343,367 to Davenport et al.

Regarding claim 1 Fallahi discloses (Figs. 2,4 and 9 column 3 lines 39-50, column 8 lines 51-67) a light emitting apparatus comprising two solid bodies 120a,120b with external walls defined by first and second semi-ellipsoids 130a and 130b each defining a source focal point (first focal point) F_1 within and a target focal point (second focal point) F_2 adjacent opposite end, having the first focal points of the ellipsoid portions coinciding, a light source 124 positioned at the source focal point of the ellipsoidal portions. Fallahi further discloses the ellipsoidal portions causes light rays emitted from the light source to focus at the target focal point F_2 .

Fallahi discloses the claimed invention except the light emitting apparatus comprising one solid body with overlapping first and second ellipsoids.

Davenport in analogous art of headlamp system with discharge arc light discloses (Fig. 1 column 2 lines 24-60) a headlamp system having pair of solid optical couplers 18, input ends of which together define a cavity for receiving the arc discharge light source 16. Davenport discloses this configuration provides a compact light apparatus with less costly and less complex arrangement and finds suitable application for vehicular lamps.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the two solid overlapping semi ellipsoid portions of Fallahi into one solid body as disclosed by Davenport for making the apparatus compact with less costly and complex arrangement used in vehicular lamps.

Regarding claims 2 and 3 Fallahi and Davenport disclose the light source including a filament which intrinsically extends between two electrodes.

Regarding claim 4 Davenport discloses (column 4 lines 3-6) the body made of glass, a material having high transmittance value in visible light range.

Regarding claim 5 Fallahi discloses (Figs. 10 and 11) the apparatus having a central cavity at the coinciding source focal points of the ellipsoid portions.

Regarding claim 6 Fallahi discloses the light bulb with all the limitations similar to that of claim 1 and additionally having opposite ends defined by conical end portions extending from the semi-ellipsoid portions. These end portions then concentrate light received from semi ellipsoidal portions onto the end of light guide 28 (Fig.1).

Claims 7, 8,9 and 10 essentially recite the same limitations as of claims 2,3,4 and 5 respectively and hence are rejected for the same reasons.

Claim 11 essentially recites the same limitations as of claim 1 and hence is rejected for the same reason.

Regarding claim 12 Fallahi discloses (column 7 lines 10-17, Fig. 8) the configuration of the bulb (emitter) is determined by the semi-minor axis (radius) H of the semi-ellipsoid.

Claims 13,14 and 15 essentially recite the same limitations as of claims 2,3 and 4 respectively and hence are rejected for the same reasons.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,406,462 to Fallahi et al.

Regarding claim 16 Fallahi discloses (Figs. 1, 4, 5) a light emitting apparatus 20 having external wall defined by an ellipsoidal member 32 with focal axis 31 and source focal point (first focal point) F_1 within the body and target focal point F_2 adjacent opposite end and a light source 24 disposed within the body at source focal point, the ellipsoidal portion causing light emitted from the source 24 focus at the target focal point which may have fiber optic light guide.

Claim 16 differs from Fallahi in that Fallahi does not exemplify the first and second overlapping ellipsoidal members.

Fallahi discloses (column 9 lines 5-10) that an embodiment with two light collecting portions provide the advantage of multiple output from a single input and can be used to transmit light to multiple remote locations. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify light emitting apparatus of Fallahi with single ellipsoidal portion to two overlapping solid ellipsoidal

Art Unit: 2879

portions having the light source at the common source focal point for providing light output in two directions.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,304,693 to Buelow et al. discloses semi ellipsoidal coupling device for efficient arrangement for coupling light between a light source and a light guide.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

S.R.

Sikha Roy
Patent Examiner
Art Unit 2879

Joseph Williams
J. Williams